

Listing of Claims:

1. A composition for plasmon-enhanced multiband optochemical sensing or molecular identification comprising a molecule, a metal nanoparticle and a plasmon energy source.
2. The composition of claim 1, wherein the molecule is an organic molecule, an inorganic molecule, a biomolecule or a microbe.
- 3- 4. Cancelled
5. The composition of claim 1, wherein the composition further comprising a spacer placed between the molecule and the metal nanoparticle and the spacer is selected from the group consisting of: a biorecognitive spacer, a dielectric spacer, a chemical link spacer, an analyte sensitive spacer or a polymer spacer.
6. The composition of claim 1, wherein the metal nanoparticle is a conducting material, a super-conducting material or a semi-conducting material.
- 7 –11. Cancelled
12. A method for plasmon-enhanced multiband optochemical sensing or molecular identification comprising the steps of: (a) positioning the nanoparticle and the molecule at a distance apart sufficient to manipulate the multiband absorption or the multiband emission of the molecule; (b) exposing the nanoparticle to energy of the plasmon source; and (c) analyzing the multiband absorption or the multiband emission of the molecule.
13. The composition of claim 1, wherein the composition is a microarray, a bio-chip, a flow cell, an endoscope, a microscopic slide, a total internal reflection cell, a catheter, an optical fiber

or a waveguide.

14 –16. Cancelled

17. The method of claim 12, wherein the analyzing of the multiband absorption or the multiband emission of the molecule is performed by at least one of the following techniques: absorption, fluorescence, hyperspectral imaging, Raman scattering, microscopy, microscopy imaging.

18 – 19. Cancelled

20. The method of claim 12, wherein the distance of the nanoparticle to the molecule is additionally controlled by the spacer placed between the nanoparticle and the molecule.

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SUMMARY

All outstanding issues have been addressed. Taking into consideration the totality of the application as filed (i.e., the specification, claims and drawings), the currently amended application is in compliance with 35 USC § 112.

Sincerely,



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Date